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Geoeconomic Industrial Policies: How Industrial Policies are Shaped in Response to National Security Concerns

A Comparison of Semiconductor Industrial Policies in Japan and South Korea (2020-2025)

Topic and Research Question

“How are industrial policies shaped in response to national security concerns in the semiconductor industry in Japan and South Korea?”

In recent years, the goals of industrial policy have shifted. Economic goals are overshadowed and non-economic objectives such as national security or the resilience of supply chains of critical products become more salient. Since this phenomenon became especially prevalent in the present era of geopolitical and geoeconomic upheavals, it is important to shed light on how industrial policies are shaped by national security concerns of states. Centrally important in this development is the semiconductor industry, for which Japan and South Korea both have ambitious industrial policies. However, the baseline conditions for the two countries vary: While South Korea is an important player in the semiconductor industry, Japan needs to rebuild capabilities after they declined in the 90s-2000s. To better understand how national security concerns impact the semiconductor industrial policies in both countries, this thesis analyses the policies from a geoeconomic perspective, enabling a mapping of economic instruments to non-economic goals and facilitating deeper insight into the intertwinement of geopolitics and economics.

State of the Art

Research on national security and industrial policy is extensive but fragmented. Works on national security range from realist perspectives (Morgenthau 1949; Waltz 1979) to broader and more contemporary approaches, including Ullman's (1983) expansion beyond military threats and the Copenhagen School (Buzan 1983; Wæver 1995), which introduces securitization. Industrial policy scholarship is similarly well established, with key contributions highlighting its role in economic development, particularly in East Asia (Johnson 1982; Amsden 1989; Chang 2002), alongside critical perspectives questioning its effectiveness (Krueger 1990; Pack 2000). More recent literature emphasizes the shift toward high-tech sectors and the growing importance of non-economic goals such as resilience and national security (Juhász, Lane, and Rodrik 2024; Criscuolo et al. 2022; Evenett et al. 2024). Finally, emerging research on geoeconomics (Luttwak 1990; Wigell and Scholvin 2018) is particularly important for this thesis, as it provides the conceptual link between economic policy instruments and strategic, security-related objectives.

Methodology and Approach

This thesis applies a **Geoeconomic Industrial Policy (GIPs)** framework, which combines theories of geoeconomics, industrial policy, and elements of technological sovereignty to analyze how states use economic instruments to pursue national security objectives. GIPs are defined as government intervention to structurally transform and support sectors/firms/economic activities to achieve the non-economic goal of national security. A national security understanding that recognizes threats from dimensions other than the traditional military realm, especially from economics, is adopted in the thesis.

The analytical framework is structured around four key dimensions:

Goals	Traditional military national security
	Economic national security
Rationales	Reduce dependence
	Increase dependence of other countries
Mode of targeting	Vertical
	Horizontal
Instruments	Offensive inducement (i.e., R&D support)
	Defensive inducement (i.e., diversification)
	Offensive sanction (i.e., export control)
	Defensive sanction (i.e., import barriers)

Goals are defined as what geoeconomic industrial policies are trying to achieve. *Rationales* are defined as the reasons why state intervention via industrial policy is necessary to achieve a goal that otherwise cannot be reached without the intervention. *Modes of targeting* are defined as the ways in which GIPs are directed towards specific or broad categories of economic actors. And lastly, *instruments* are ordered along four categories: offensive inducement, defensive inducement, offensive sanction, and defensive sanction.

Methodologically, the study relies on a mixed approach, combining qualitative analysis of policy documents, legislation, and official statements with quantitative data such as trade and production statistics. To address the challenge of unclear or potentially misleading government intentions, the framework incorporates additional checks, including scrutinizing the goal-instrument coherence, and plausibility within the broader geopolitical and economic context. Empirically, the framework is applied to a comparative case study of Japan and South Korea's semiconductor policies between January 2020 and July 2025.

Main Facts

The empirical analysis shows that, typically, the goal of GIPs was to increase economic security, meaning the resilience of supply chains. In some cases, traditional national security to hedge against military threats was pursued. In many cases, both goals were intertwined. South Korea emphasized national security more than Japan, though often relying on partial securitization and sometimes lacking coherence between stated goals and instruments.

The predominant rationale for both was to reduce external dependencies. This does not mean that autonomy was pursued, as friendshoring rationales could also be observed. South Korea's semiconductor industry being more advanced at the time of the analysis, some ambitions to increase global influence in the semiconductor industry could also be observed, likely to be able to use the industry as diplomatic leverage.

Most analyzed GIPs are vertically targeting, therefore focusing on the semiconductor industry explicitly. However, in both countries the targets were often bundled, meaning the policies target a wide range of strategic industries (such as AI, aerospace), diluting the vertical classification by including horizontal elements.

Lastly, both countries predominantly applied offensive inducement instruments (subsidies being the most important instrument in total), indicating Japan's and South Korea's careful consideration of defensive instruments. In total, the analysis counts the use of 19 offensive inducement, three defensive sanction, and two defensive inducement instruments by South Korea, while for Japan six offensive inducement and one defensive sanction instrument could be observed. This means that South Korea employs a broader toolbox while also applying more instruments from the two defensive categories. Offensive sanction instruments could not be observed for either of the two countries.

Overall, both cases highlight a strong emphasis on strengthening domestic capabilities and managing interdependence, with limited use of restrictive or coercive policy tools.

Results

The thesis finds that industrial policies in Japan and South Korea's semiconductor sectors are increasingly shaped by national security concerns through non-economic goals, dependency reduction rationales,

strong targeting as well as offensive inducement instruments. Generally, Japan's approach is more centralized and holistic than South Korea's more fragmented approach, due to the fact that Japan utilizes a central law governing how it employs economic measures to promote national security. Importantly, the results show that instead of autonomy, technological sovereignty is pursued via collaborating with like-minded countries, potentially leading to a blocification of semiconductor supply chains. The thesis also shows that national security must be understood in an expanded, integrated way that includes economic and other non-military dimensions, as states increasingly treat issues like supply chains and industrial capacity as core security concerns and shape their industrial policies accordingly.

By doing so, both states respond to a broader structural shift: economic policy is becoming a core tool of national security, geoeconomic competition is intensifying, and more sectors beyond semiconductors are likely to be drawn into strategic state intervention. This raises challenges for balancing security with economic efficiency and managing fragmentation of global value chains. Future research should therefore expand the analytical framework to other countries and industries, examine how policy instruments are selected, and – crucially – analyze the implementation and effectiveness of these policies in practice, including their impact on firms, innovation, and international cooperation.

References

All references can be found in the full version of the MA thesis available at

<https://theses.univie.ac.at/detail/79812>

About the Author

Lucas Wiegand holds a BA in Political Science with a focus on East Asian security dynamics and completed an exchange semester at National Chengchi University as part of his MA. He specializes in Europe–East Asia relations, especially in the field of technology, geoeconomics, and economic security, and has gained professional experience in those dimensions across several international organizations.

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